

What is claimed is:

1. An electronic camera, comprising:

an image capturing unit capturing an image of a  
5 subject, and outputting an image signal;

an image processing unit obtaining image data in  
a predetermined format based on the image signal  
captured by said image capturing unit;

a setting unit setting an image capturing  
10 condition for capturing the image of the subject;

a storing unit storing a plurality of pieces of  
image forming instruction information used when a  
visible image is formed based on the image data;

a selecting unit selecting a predetermined piece  
15 of image forming instruction information from among the  
plurality of pieces of image forming instruction  
information stored in said storing unit, based on the  
image capturing condition set by said setting unit; and

an outputting unit associating the image forming  
20 instruction information selected by said selecting unit  
with the image data, and outputting the image forming  
instruction information in association with the image  
data .

25 2. An electronic camera, comprising:

an image capturing unit capturing an image of a subject, and outputting an image signal;

an image processing unit obtaining image data in a predetermined format based on the image signal  
5 captured by said image capturing unit;

a shooting mode selecting unit selecting a mode used for shooting from among a plurality of shooting modes;

10 a storing unit storing a plurality of image forming instruction modes used when a visible image is formed based on the image data;

an image forming instruction mode selecting unit selecting a predetermined image forming instruction mode from among the plurality of image forming  
15 instruction modes stored in said storing unit based on the shooting mode selected by said shooting mode selecting unit; and

an outputting unit associating the image forming instruction mode selected by said image forming  
20 instruction mode selecting unit with the image data, and outputting the image forming instruction mode in association with the image data.

3. An electronic camera, comprising:

25 an image capturing unit capturing an image of a

subject, and outputting an image signal;

an image processing unit obtaining image data in a predetermined format based on the image signal captured by said image capturing unit;

5 an image capturing condition setting unit setting a condition for image capturing performed by said image capturing unit based on status of the subject;

10 a storing unit storing a plurality of image forming instruction modes used when a visible image is formed based on the image data;

15 an image forming instruction mode selecting unit selecting a predetermined image forming instruction mode from among the plurality of image forming instruction modes stored in said storing unit based on the condition for image capturing, which is set by said image capturing condition setting unit; and

20 an outputting unit associating the image forming instruction mode selected by said image forming instruction mode selecting unit with the image data, and outputting the image forming instruction mode in association with the image data.

4. An electronic camera, comprising:

25 an image capturing unit capturing an image of a subject, and outputting an image signal;

10071836-062802

an image processing unit obtaining image data in a predetermined format based on the image signal captured by said image capturing unit;

5 a shooting mode selecting unit selecting a mode used for shooting from among a plurality of shooting modes;

an image capturing condition setting unit setting a condition for image capturing performed by said image capturing unit based on status of the subject;

10 a storing unit storing a plurality of image forming instruction modes used when a visible image is formed based on the image data;

15 an image forming instruction mode selecting unit selecting a predetermined image forming instruction mode from among the plurality of image forming instruction modes stored in said storing unit based on the shooting mode selected by said shooting mode selecting unit, and the condition for image capturing, which is set by said image capturing condition setting unit; and

20 an outputting unit associating the image forming instruction mode selected by said image forming instruction mode selecting unit with the image data, and outputting the image forming instruction mode in association with the image data.

25

5. An electronic camera, comprising:

an image capturing unit capturing an image of a subject, and outputting an image signal;

5 an image processing unit obtaining image data in a predetermined format based on the image signal captured by said image capturing unit;

10 a setting unit setting an image capturing condition for capturing the image of the subject from among a plurality of image capturing conditions to which priorities are assigned;

a storing unit storing a plurality of pieces of image forming instruction information used when a visible image is formed based on the image data;

15 a selecting unit selecting a predetermined piece of image forming instruction information from among the plurality of pieces of image forming instruction information stored in said storing unit, based on a priority assigned to the image capturing condition set  
20 by said setting unit; and

an outputting unit associating the image forming instruction information selected by said selecting unit with the image data, and outputting the image forming instruction information in association with the image  
25 data.

6. The electronic camera according to claim 5,  
wherein:

the plurality of image capturing conditions  
5 include at least a mode used for shooting, and a  
condition for image capturing; and

the mode used for shooting is assigned a priority  
higher than the condition for image capturing.

10 7. An electronic camera system having an  
electronic camera, and an image forming apparatus,  
wherein:

the electronic camera comprises  
an image capturing unit capturing an image  
15 of a subject, and outputting an image signal,

an image processing unit obtaining image  
data in a predetermined format based on the image signal  
captured by said image capturing unit,

20 a setting unit setting an image capturing  
condition for capturing the image of the subject,

a storing unit storing a plurality of pieces  
of image forming instruction information used when a  
visible image is formed based on the image data,

25 a selecting unit selecting a predetermined  
piece of image forming instruction information from

10071536-062800

among the plurality of pieces of image forming instruction information stored in said storing unit, based on the image capturing condition set by said setting unit and

5                   an outputting unit associating the image forming instruction information selected by said selecting unit with the image data, and outputting the image forming instruction information in association with the image data; and

10                  the image forming apparatus comprises

                  a reading unit reading image data to be formed as an image, and image forming instruction information in association with the image data,

                  an image forming mode selecting unit  
15                  selecting an image forming mode, which corresponds to the image forming instruction information read by said reading unit, from among a plurality of image forming modes performing an image forming process according to a different condition,

20                  an image forming processing unit performing an image quality forming process according to the image forming mode selected by said image forming mode selecting unit, and

                  an image outputting unit outputting image  
25                  data for which an image process is performed by said

20071836-062800

image forming processing unit.

8. A method associating predetermined information with image data, and outputting the predetermined information in association with the image data, comprising:

setting an image capturing condition for capturing an image of a subject;

capturing the image of the subject, and outputting an image signal;

obtaining image data in a predetermined format based on the image signal;

selecting a predetermined piece of image forming instruction information from among a plurality of pieces of image forming instruction information used when a visible image is formed based on the obtained image data, according to the set image capturing condition; and

associating the selected image forming instruction information with the obtained image data, and outputting the image forming instruction information in association with the image data.

9. A method associating predetermined information with image data, and outputting the predetermined information in association with the image



data, comprising:

selecting a mode used for shooting from among a plurality of shooting modes;

capturing an image of a subject, and outputting  
5 an image signal;

obtaining image data in a predetermined format based on the image signal;

selecting a predetermined image forming instruction mode from among a plurality of image forming instruction modes used when a visible image is formed  
10 based on the obtained image data, according to the selected shooting mode; and

associating the selected image forming instruction mode with the obtained image data, and  
15 outputting the image forming instruction mode in associating with the image data.

10. A method associating predetermined information with image data, and outputting the predetermined information in association with the image  
20 data, comprising:

setting a condition for image capturing based on status of a subject;

capturing an image of the subject, and outputting  
25 an image signal;

10074836 062800

obtaining image data in a predetermined format based on the image signal;

selecting a predetermined image forming instruction mode from among a plurality of image forming instruction modes used when a visible image is formed based on the obtained image data, according to the set condition for image capturing; and

associating the selected image forming instruction mode with the obtained image data, and outputting the image forming instruction mode in association with the image data.

11. A method associating predetermined information with image data, and outputting the predetermined information in association with the image data, comprising:

selecting a mode used for shooting from among a plurality of shooting modes;

setting a condition for image capturing based on status of a subject;

capturing an image of the subject, and outputting an image signal;

obtaining image data in a predetermined format based on the image signal;

selecting a predetermined image forming

instruction mode from among a plurality of image forming instruction modes used when a visible image is formed based on the obtained image data, according to the selected shooting mode and the set condition for image capturing; and

associating the selected image forming instruction mode with the obtained image data, and outputting the image forming instruction mode in associating with the image data.

12. A method associating predetermined information with image data, and outputting the predetermined information in association with the image data, comprising:

setting an image capturing condition for capturing an image of a subject, from among a plurality of image capturing conditions to which priorities are assigned;

capturing the image of the subject, and outputting an image signal;

obtaining image data in a predetermined format based on the image signal;

selecting a predetermined piece of image forming instruction information from among a plurality of pieces of image forming instruction information used when a

visible image is formed based on the obtained image data,  
according to a priority assigned to the set image  
capturing condition; and

5 associating the selected image forming  
instruction information with the obtained image data,  
and outputting the image forming instruction  
information in associating with the image data.

13. An image forming method, comprising:  
10 setting an image capturing condition for  
capturing an image of a subject,  
capturing the image of the subject, and outputting  
an image signal,  
obtaining image data in a predetermined format  
15 based on the image signal,  
selecting a predetermined piece of image forming  
instruction information from among a plurality of pieces  
of image forming instruction information used when a  
visible image is formed based on the obtained image data,  
20 according to the set image capturing condition, and  
associating the selected image forming  
instruction information with the obtained image data,  
and outputting the image forming instruction  
information in associating with the image data, in an  
25 electronic camera; and

19. The electronic camera system according to claim 18, wherein

said setting unit sets correction instruction information for instructing corrections for a plurality of combined processes performed when a visible image is formed from the image data, based on the shooting condition corrected by said shooting condition correcting unit.

20. A method associating predetermined information with image data, and outputting the predetermined information in association with the image data, comprising:

correcting a shooting condition for exposure or image quality at the time of shooting;

capturing an image of a subject, and outputting an image signal;

obtaining image data in a predetermined format based on the image signal;

setting correction instruction information for instructing a correction for a process performed when a visible image is formed from the obtained image data, based on the corrected shooting condition; and

associating the set correction instruction

information for instructing the correction for the process performed when a visible image is formed with the image data, and outputting the correction instruction information in association with the image data.

21. An image forming method, comprising:  
correcting a shooting condition for exposure or image quality at the time of shooting,  
capturing an image of a subject, and outputting an image signal,  
obtaining image data in a predetermined format based on the image signal,  
setting correction instruction information for instructing a correction for a process performed when a visible image is formed from the obtained image data, based on the corrected shooting condition, and  
associating the set correction instruction information for instructing the correction for the process performed when a visible image is formed with the image data, and outputting the correction instruction information in association with the image data, in an electronic camera; and  
reading image data to be formed as an image, and correction instruction information in association with

the image data,

performing an image quality forming process based on the read correction instruction information, and

outputting the image data for which the image  
5 process is performed as the image quality forming process, in an image forming apparatus.

22. An electronic camera having a recording unit which attaches supplementary information to image  
10 data obtained by shooting, and records the image data with the supplementary information attached on a recording medium as one image file, comprising

a parameter reading unit reading a parameter for an image forming instruction prerecorded on the  
15 recording medium, wherein:

the recording unit includes the parameter for the image forming instruction, which is read by said parameter reading unit, in the supplementary information, and records the supplementary information  
20 including the parameter; and

an image is formed based on the parameter for the image forming instruction, which is included in the supplementary information.

25 23. The electronic camera according to claim 22,

further comprising

a selecting unit selecting whether or not to use the parameter for the image forming instruction, which is read by said parameter reading unit, according to an instruction from a user.

24. An image forming apparatus forming an image based on an image file including image data and supplementary information, wherein

an image is formed based on a parameter for an image forming instruction, which is included in the supplementary information and prerecorded on a recording medium.

25. An image forming apparatus forming an image based on an image file that is recorded on a recording medium, and includes image data and supplementary information, wherein

an image is formed based on a parameter for a second image forming instruction, if a parameter for a first image forming instruction is recorded on the recording medium, and if the parameter for the second image forming instruction is included in the supplementary information.



26. A recording medium recording a parameter for an image forming instruction used when a visible image is formed based on image data.

5           27. The recording medium according to claim 26, wherein

the parameter for the image forming instruction includes at least either of an image forming mode, and image forming condition change information.

10

28. The recording medium according to claim 26, wherein

the parameter for the image forming instruction is recorded in an area which is not erased by initialization.

15

29. An electronic camera system having an electronic camera comprising a recording unit, which attaches supplementary information to image data obtained by shooting and records the image data with the supplementary information attached on a recording medium as one image file, and an image forming apparatus forming an image based on the image file, wherein:

the electronic camera comprises  
25           a parameter reading unit reading a

parameter for an image forming instruction, which is prerecorded on the recording medium;

the recording unit includes the parameter for the image forming instruction, which is read by said parameter reading unit, in the supplementary information, and records the supplementary information including the parameter; and

the image forming apparatus forms an image based on the parameter for the image forming instruction, which is included in the supplementary information of the image file.

30. A method attaching supplementary information to image data obtained by shooting, and recording the image data with the supplementary information attached on a recording medium as one image file, comprising:

reading a parameter for an image forming instruction, which is prerecorded on the recording medium;

including the read parameter for the image forming instruction in the supplementary information, and recording the supplementary information including the parameter; and

forming an image based on the parameter for the

image forming instruction, which is included in the supplementary information.

31. A method forming an image based on an image  
5 file including image data and supplementary information,  
comprising

forming an image based on a parameter for an image  
forming instruction, which is included in the  
supplementary information and prerecorded on a  
10 recording medium.

32. A method forming an image based on an image  
file which is recorded on a recording medium, and  
includes image data and supplementary information,  
15 comprising

forming an image based on a parameter for a second  
image forming instruction, if a parameter for a first  
image forming instruction is prerecorded on the  
recording medium, and if the parameter for the second  
20 image forming instruction is included in the  
supplementary information.

33. A method with which an electronic camera  
attaches supplementary information to image data  
25 obtained by shooting, and records the image data with

10071836-062800

the supplementary information attached as one image file,  
and an image forming apparatus forms an image based on  
the image file, comprising:

5       reading a parameter for an image forming  
instruction, which is prerecorded on a recording medium,  
and

10       including the read parameter for the image forming  
instruction in the supplementary information, and  
recording the supplementary information including the  
parameter, in the electronic camera; and

15       forming an image based on the parameter for the  
image forming instruction, which is included in the  
supplementary information of the image file, in the  
image forming apparatus.

34. An electronic camera, comprising:

20       a parameter reading unit reading a parameter for  
an image process setting, which is prerecorded on a  
recording medium;

25       an image processing unit performing an image  
process for digital image data obtained by shooting;  
and

      a recording unit recording, on the recording  
medium, output image data of said image processing unit,  
or image data based on the output image data.

35. The electronic camera according to claim 34,  
wherein

5       said image processing unit performs an image  
process based on the parameter for the image process  
setting, which is read by said parameter reading unit.

36. The electronic camera according to claim 34,  
further comprising

10       an image process mode setting unit setting an  
image process mode according to an instruction from a  
user, wherein

15       said image processing unit changes a set image  
process mode based on the parameter for the image process  
setting, which is read by said parameter reading unit,  
and performs an image process based on the changed image  
process mode.

37. The electronic camera according to claim 34,  
20 further comprising:

      an image process mode setting unit setting an  
image process mode according to an instruction from a  
user; and

25       a selecting unit selecting either of the parameter  
for the image process setting, which is read by said

parameter reading unit, and a set image process mode according to an instruction from the user, wherein

5       said image processing unit performs an image process based on one of the parameter for the image process setting and the set image process mode , which is selected by said selecting unit.

10       38. An electronic camera having a recording unit, which attaches supplementary information to image data obtained by shooting and records the image data with the supplementary information attached on a recording medium, comprising:

15       a parameter reading unit reading a parameter for an image process setting, which is prerecorded on the recording medium; and

      a storing unit storing a plurality of pieces of image forming instruction information used when a visible image is formed based on the image data.

20       39. The electronic camera according to claim 38, further comprising

      a selecting unit selecting a predetermined piece of image forming instruction information from among a plurality of pieces of image forming instruction information stored in said storing unit based on the

25

10071836 062802

parameter for the image process setting, which is read by said parameter reading unit, wherein

the recording unit attaches supplementary information including the image forming instruction information selected by said selecting unit to the image data, and records the image data with the supplementary information attached.

40. The electronic camera according to claim 38, further comprising:

an image process mode setting unit setting an image process mode according to an instruction from a user;

a first selecting unit selecting either of a parameter for an image process setting, which is read by said parameter reading unit, and the set image process mode according to an instruction from the user; and

a second selecting unit selecting a predetermined piece of image forming instruction information from among the plurality of pieces of image forming instruction information stored in said storing unit based on the image process mode or the parameter for the image process setting, which is selected by said first selecting unit, wherein

the recording unit attaches supplementary

information including the image forming instruction information selected by said second selecting unit to the image data, and records the image data with the supplementary information attached.

5

41. A recording medium recording a parameter for an image process setting, which is used at least when an electronic camera performs an image process, or obtains image forming instruction information.

10

42. The recording medium according to claim 41, wherein

the parameter for the image process setting includes at least any one of grayscale, white balance, sharpness, and chroma.

15

43. The recording medium according to claim 41, wherein

the parameter for the image process setting is recorded in an area that is not erased by initialization.

20

44. An electronic camera system having an electronic camera comprising a recording unit, which attaches supplementary information to image data obtained by shooting and records the image data with

25

10071836 0628007



the supplementary information attached on a recording medium, and an image forming apparatus forming a visible image based on the image data with the supplementary information attached, wherein:

- 5           the electronic camera comprises
- a parameter reading unit reading a parameter for an image process setting, which is prerecorded on the recording medium,
- a storing unit storing a plurality of pieces
- 10       of image forming instruction information used when the image forming apparatus forms a visible image based on the image data, and
- an instruction information selecting unit selecting a predetermined piece of image forming instruction information from among the plurality of
- 15       pieces of image forming instruction information stored in said storing unit based on the parameter for the image process setting, which is read by said parameter reading unit;
- 20       the recording unit includes the image forming instruction information selected by said instruction information selecting unit in the supplementary information, and records the supplementary information including the image forming instruction information;
- 25       and

the image forming apparatus forms a visible image based on the image forming instruction information included in the supplementary information.

5           45.    A recording method, comprising:  
              reading a parameter for an image process setting,  
              which is prerecorded on a recording medium;  
              performing an image process for digital image data  
              obtained by shooting; and

10           recording on the recording medium output image  
              data for which the image process is performed, or image  
              data based on the output image data .

15           46.    A    method    attaching    supplementary  
              information to image data which is obtained by shooting,  
              and recording the image data with the supplementary  
              information attached on a recording medium, comprising:

              reading a parameter for an image process setting,  
              which is prerecorded on the recording medium;  
20           selecting a predetermined piece of image forming  
              instruction information from among a plurality of pieces  
              of image forming instruction information used when a  
              visible image is formed based on the image data,  
              according to the read parameter for the image process  
25           setting; and

attaching to the image data the supplementary information including the selected image forming instruction information, and recording the image data with the supplementary information attached.

5

47. A method with which an electronic camera attaches supplementary information to image data obtained by shooting and records the image data with the supplementary information attached on a recording medium, and an image forming apparatus forms a visible image based on the image data with the supplementary information attached, comprising:

10

reading a parameter for an image process setting, which is prerecorded on the recording medium,

15

selecting a predetermined piece of image forming instruction information from among a plurality of pieces of image forming instruction information used when the image forming apparatus forms a visible image based on the image data, according to the read parameter for the image process setting, and

20

including the selected image forming instruction information in the supplementary information, and recording the supplementary information including the image forming instruction information, in the electronic camera; and

25

20071836-062802

forming a visible image based on the image forming instruction information included in the supplementary information, in the image forming apparatus.

2007-10-15 09:28:00